Gary, can you call me TUE or WED afternoon to discuss? I have call TUE that should be over by 2:30 EST

Edwin F. Barth, Ph.D., P.E., C.I.H., R.S.

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**From:** Miller, Garyg
**Sent:** Monday, November 25, 2013 9:45 AM
**To:** Barth, Edwin
**Subject:** RE: San Jacinto Feasibility Study

Thanks Ed. Are you aware of any papers that may discuss the relative merits of sheet piles in preventing re-suspension? And, do you think is it worthwhile to even use the sheet piles compared to doing the excavation/dredging without them? It seems they would reduce the amount of re-suspension & dispersion by a significant amount compared to not using them, but the PRPs are listing all the negatives & none of the positives (are there any positives?). Removal of part of the most highly contaminated material certainly has long term benefits compared leaving it in place & subject to some future catastrophic flood. The FS shows only a minor increase in short term contamination increases (bar graphs) for this alternative including sheet piles.

Thanks,

Gary Miller

EPA Remedial Project Manager

214-665-8318

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**From:** Barth, Edwin
**Sent:** Friday, November 22, 2013 2:04 PM
**To:** Miller, Garyg
**Subject:** RE: San Jacinto Feasibility Study

Many points they raise are valid. There are always issues with joint seals and durability of the joint. I have seen some sheet piling rejected due to subsurface geology, and sometimes they do not keep a true line. But nothing is perfect, so you weigh it against alternatives.

Edwin F. Barth, Ph.D., P.E., C.I.H., R.S.

**From:** Miller, Garyg
**Sent:** Friday, November 22, 2013 9:58 AM
**To:** Barth, Edwin
**Cc:** Sanchez, Carlos; Foster, Anne; Salinas, Amy
**Subject:** San Jacinto Feasibility Study

Ed,

Don't know if you have any experience with the issues below from the San Jacinto FS, but if you do
have any comments on these statements I would appreciate your thoughts (such as significance of
issues raised, accuracy, sheetpile use widespread? any EPA references that may clarify pros & cons
of sheetpiles during remedial action; etc.).  Sheetpiles are a part of several of the alternatives in the
FS & would be used to reduce resuspension of sediments during excavation & removal of
contaminated material.

Thanks,

Gary Miller
EPA Remedial Project Manager
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p. 41 of FS:  "Further, case studies have shown that engineering controls used
to control impacts from dredging such as sheetpiles may have limited effectiveness
(Anchor
Environmental 2005; Anchor QEA and Arcadis 2010) and can pose unintended
consequences, such as concentration of dissolved-phase chemicals, localized scour
adjacent to
the barrier, and/or the spread of contaminants during their removal.



p. 57 of FS:  "The use of a sheetpile barrier does little to enhance the short-term
effectiveness of this
alternative because of documented effectiveness issues (Anchor Environmental 2005;

Anchor QEA and Arcadis

2010; and USACE 2008) with engineered barriers, including:

- Incomplete isolation due to gaps in sheetpiles that may occur during installation
- The need to provide openings in the sheetpile to balance water pressures on both sides of the pile
- The potential for river-current-induced scour adjacent to the sheetpile.

In addition to these documented issues with sheetpile barriers, the use of sheetpiles increases the risk of

recontamination and resuspension of soil/sediments during sheetpile installation

and removal (Ecology 1995), and potential cross-contamination associated with driving sheetpiling through impacted materials into non-impacted material."